# BRUHAT BANGALORE MAHANAGARA PALIKE

## PROJECT : WIDENING OF JAKKUR ROAD NEAR RAITHARA SANTHE FROM NH-7 UP TO SWD IN YELAHANKA .

## DETAILED ESTIMATE

**Est cost : 100.00lakhs**

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| **A** | **SITE CLEARANCE AND DISMANTLING** | | | | | | | | |
| 1 | KSRRB M200-29. Dismantling of barbed wire fencing / wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and stacking serviceable material and unserviceable material separately complete as per specifications. MORTH Specification No. 202 [ P.No. 147 I.No.18.54 of KPWD SR 12-13) | | | | | | | | |
| | On road side | Rmt | 1 | 200 | -- | -- | 200 | 30.24 | 6048.00 |
| | Basic Rate Rs.= 28.00 | | | | | | | | |
| | Add 8% A.W Rs. = 2.24 | | | | | | | | |
| | **Total Rate Rs. = 30.24** | | | | | | | | |
| 2 | Cutting of trees girth from 300mm to 600mm including cutting of trunks, branches and removal of stumps stacking of serviceable materials earth filling in the depressions / pit, labour charges complete as per specifications. MORTH specification clause 201/ Chapter 2 600mm to 900mm [ P.No. 144 I.No.18.20 of KPWD SR 12-13) | | | | | | | | |
| | On road side | Each | 10 | -- | -- | -- | 10 | 270.00 | 2700.00 |
| | Basic Rate Rs.= 250.00 | | | | | | | | |
| | Add 8% A.W Rs. = 20.00 | | | | | | | | |
| | **Total Rate Rs. = 270.00** | | | | | | | | |
| 3 | KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm,by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per [ P.No. 144 I.No.18.11 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur road | sqm | 1 | 300.00 | 5.00 | -- | 1500.00 | | |
| | | | | | | | 1500.00 | 4.54 | 6804.00 |
| | Basic Rate Rs.= 4.20 | | | | | | | | |
| | Add 8% A.W Rs. = 0.34 | | | | | | | | |
| | **Total Rate Rs. = 4.54** | | | | | | | | |
| 4 | For dismantling of existing structures and other miscellenous works etc complete [ P.No. XXXVIII I.No.23 and 9 of KPWD SR 12-13) | | | | | | | | |
| | JCB Excavator | Day | 1 | 6.00 | -- | -- | 6.00 | 7257.60 | 43545.60 |
| | Tipper charges - 5cum | Day | 1 | 6.00 | -- | -- | 6.00 | 2073.60 | ~~12441.60~~ 12412.00 |
| | Basic Rate Rs.= 6720.00 | | | Basic Rate Rs.= 1920.00 | | | | | |
| | Add 8% A.W Rs. = 537.60 | | | Add 8% A.W Rs. = 153.60 | | | | | |
| | **Total Rate Rs. = 7257.60** | | | **Total Rate Rs. = 2073.60** | | | | | |
| | ~~Total Rate Rs. = 7795.20~~ | | | | | | | | |
| 5 | Dismantling of existing structures like culverts, bridges,retaining walls and other structure comprising of masonry, cement concrete,wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications [ P.No. 145 I.No.18.18 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur road | cum | 2 | 50.00 | 1.00 | 1.00 | 100.00 | | |
| | | | | | | | 100.00 | 276.48 | 27648.00 |
| | Basic Rate Rs.= 256.00 | | | | | | | | |
| | Add 8% A.W Rs. = 20.48 | | | | | | | | |
| | **Total Rate Rs. = 276.48** | | | | | | | | |



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| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Total cost of Site Clearance & Dismantling | | | 99187.00 |
| B | **FORMATION OF ROAD AND ASPHALTING** | | | | | | | | |
| 1 | Excavation for road way in soil by mechanical means including cutting and pushing the earth to site of embankment upto a including trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections complete as per specifications. MORTH Specification No. 301and lead 10km lead [ P.No. 151 I.No.19.11 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | cum | 2 | 300.00 | 3.0+5.0/2 | 0.45 | 1080.00 | | |
| | | | | | | | **1080.00** | 165.02 | 178226.00 |
| | Basic Rate Rs.= | 152.80 | | | | | | | |
| | Add 8% A.W Rs. = | 12.22 | | | | | | | |
| | **Total Rate Rs. =** | **165.02** | | | | | | | |
| 2 | Construction of embankment with approved material deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of Table 300-2 complete asper specifications.which includes , watering charges & compaction by vibratory roller) MORTH Specification No. 305 [ P.No. 157 I.No.19.61 of KPWD SR 12-13) | | | | | | | | |
| | Considering 30% quanity | Cum | 2 | 300.0 | 4.0 | 0.20 | 480.00 | 67.61 | 32452.00 |
| | Basic Rate Rs.= | 62.60 | | | | | | | |
| | Add 8% A.W Rs. = | 5.01 | | | | | | | |
| | **Total Rate Rs. =** | **67.61** | | | | | | | |
| 4 | KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications.MORTH / Chapter 3 [ P.No. 158 I.No.19.64 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | sqm | 2 | 300.00 | 4.00 | | **2400.00** | 3.78 | 80376.00 |
| | Basic Rate Rs.= | 3.50 | | | | | | | |
| | Add 8% A.W Rs. = | 0.28 | | | | | | | |
| | **Total Rate Rs. =** | **3.78** | | | | | | | |
| 5 | Construction of granular sub base by providing close graded material,mixing in a machanical mix plant at OMC, carriage of mixed material to work site,spreding in uniform layers with motar grader on prepared surface and compacting with vibratory power roller to achieve the desired density,complete as per specifications For grading II meterial and lead 10km lead [ P.No. 164 I.No.20.40.2 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | cum | 2 | 300.00 | 5.00 | 0.20 | 600.00 | | |
| | | | | | | | **600.00** | 1002.51 | 601506.00 |
| | Basic Rate Rs.= | 928.25 | | | | | | | |
| | Add 8% A.W Rs. = | 74.26 | | | | | | | |
| | **Total Rate Rs. =** | **1002.51** | | | | | | | |
| 6 | Providing laying Compacting graded stone agregates to wet mix mecadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in Sub base/base coarse on well prepared surface & compacting with vibratory roller to achioeve the desire density complete as per specifications and lead 10km lead [ P.No. 167 I.No.20.18 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | cum | 2 | 300.00 | 5.00 | 0.20 | 600.00 | | |
| | | | | | | | 600.00 | 1111.59 | 666954.00 |
| | Basic Rate Rs.= | 1029.25 | | | | | | | |
| | Add 8% A.W Rs. = | 82.34 | | | | | | | |
| | **Total Rate Rs. =** | **1111.59** | | | | | | | |
| 7 | Providing and applying primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. MORTH Specification No. 502 [ P.No. 173 I.No.21.60 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | Sqm | 2 | 300.00 | 6.00 | | 3600.00 | 39.64 | 782490.00 |
| | Basic Rate Rs.= | 36.70 | | | | | | | |



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| | ption of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| | Add 8% A.W Rs. = 2.94 | | | | | | | | |
| | **Total Rate Rs. = 39.64** | | | | | | | | |
| | aing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per ssign mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant 40 tonne capacity, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, 50 /75mm compacted thickness with 3.3% bitumen but excluding cost of primer / tack coat with lead upto 1km including cost of all materials, labour, HOM of machineries complete as per specifications MORTH /Chapter 5 With 60/70 grade bitumen and lead 10km lead | | | | | | | | |
| | [P.No. 173 I.No.21 11.2 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | Cum | 2 | 300.00 | 6.00 | 0.05 | 180.00 | 6252.39 | 1125430.00 |
| | Basic Rate Rs.= 5789.25 | | | | | | | | |
| | Add 8% A.W Rs. = 463.14 | | | | | | | | |
| | **Total Rate Rs. = 6252.39** | | | | | | | | |
| 9 | KSRRB M500-10. Tack Coat:- Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom. complete as per specifications. MORTH Specification No. 503 21.10.1 - do - using bitumen emulsion | | | | | | | | |
| | [P.No. 173 I.No.21.10.1 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | Sqm | 4 | 300.00 | 6.00 | | 7200.00 | 10.80 | 77760.00 |
| | Basic Rate Rs.= 10.00 | | | | | | | | |
| | Add 8% A.W Rs. = 0.80 | | | | | | | | |
| | **Total Rate Rs. = 10.80** | | | | | | | | |
| 10 | Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading,premixed with bituminous binder at 5.4 to 5.6% of mix and filler,transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment,rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects as per specifications.MORTH Specification No. 509 30-45mm compacted thickness | | | | | | | | |
| | [P.No. 176 I.No.21.22.2 of KPWD SR 12-13) | | | | | | | | |
| | From bellary road up to Jakkur | Cum | 2 | 300.00 | 6.00 | 0.038 | 136.80 | 10517.31 | 1438768.00 |
| | Basic Rate Rs.= 9738.25 | | | | | | | | |
| | Add 8% A.W Rs. = 779.06 | | | | | | | | |
| | **Total Rate Rs. = 10517.31** | | | | | | | | |
| | Total cost of Formation of Service Road | | | | | | | | 4983962.00 |

## C CONSTRUCTION OF DRAINS AND CULVETRS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications.MORTH Chapter 3 | | | | | | | | |
| | [P.No. 150 I.No.19.1 of KPWD SR 12-13) | | | | | | | | |
| | For Drain | Cum | 2 | 250.00 | 1.20 | 1.00 | 600.00 | | |
| | | | | | | | **600.00** | 140.18 | |
| | Basic Rate Rs.= 54.00 | | | | | | | | |
| | Conveying 75.80 | | | | | | | | |
| | 129.80 | | | | | | | | |
| | Add 8% A.W Rs. = 10.38 | | | | | | | | |
| | **Total Rate Rs. = 140.18** | | | | | | | | |
| 2 | Providing and laying in position plain cement concrete of mix M7.5 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregtes @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth,including cost of all materials, labour, HOM of machinery, curing complete as per specifications. | | | | | | | | |
| | [P.No. 12 I.No.4.30 of KPWD SR 12-13) | | | | | | | | |
| | For Drain | Cum | 2 | 250.00 | 1.00 | 0.10 | 50.00 | | |
| | | | | | | | **50.00** | 3884.76 | 1238.00 |
| | Basic Rate Rs.= 3597.00 | | | | | | | | |



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| Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|
| Add 8% A.W Rs. = | 287.76 | | | | | | | |
| **Total Rate Rs. =** | **3884.76** | | | | | | | |
| Providing and laying cement concrete using 20mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 cm thick layers and well compacted including vibrating curing etc., including smooth finish in CM 1:3, with all lead and lift etc., complete. (exculsive of cost of steel and fabrication charges) 4.49.1 - do - Ready mixed Cement concrete for Beams, Columns, Staircase and Roof with M-20 (Cement-320 Kg/cum) [P No. 19 I.No.4.49.1 of KPWD SR 12-13) | | | | | | | | |
| For Drain | Cum | 2 | 250.00 | 0.85 | 0.15 | 75.00 | | |
| For Drain | | 2 | 250.00 | 0.85 | 0.15 | 75.00 | | |
| | | | | | | 150.00 | 5637.60 | 845640.00 |
| Basic Rate Rs.= | 5220.00 | | | | | | | |
| Add 8% A.W Rs. = | 417.60 | | | | | | | |
| **Total Rate Rs. =** | **5637.60** | | | | | | | |
| Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. [P No. 19 I.No.4.46 of KPWD SR 12-13) | | | | | | | | |
| Considering 60kg/cum | ton | -- | -- | -- | -- | 6.00 | 73234.80 | 439409.00 |
| Basic Rate Rs.= | 67810.00 | | | | | | | |
| Add 8% A.W Rs. = | 5424.80 | | | | | | | |
| **Total Rate Rs. =** | **73234.80** | | | | | | | |
| Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specificaitons. P no:17, I no: 4.31 of KPWD SR 11-12) | | | | | | | | |
| i) side walls | Sqm | 8 | 250.00 | 0.85 | | 2000.00 | | |
| | | | | | | 2000.00 | 244.08 | 488160.00 |
| Basic Rate Rs.= | 226.00 | | | | | | | |
| Add 8% A.W Rs. = | 18.08 | | | | | | | |
| **Total Rate Rs. =** | **244.08** | | | | | | | |
| 5 Providing pre cast slabs of size 1.0x.60m for drain covering slabs | Sqm | 2 | 250.00 | 1.00 | | 500.00 | 900.00 | 450000.00 |
| Filling available excavated earth ( excluding rock ) in sides of foundations upto plinth in layers not exceeding 20 cms, including earth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. From bellary No. 6 I.No.2.10 of KPWD SR 12-13) | | | | | | | | |
| 20% qty of I.No. | Cum | -- | -- | -- | -- | 120.00 | 90.72 | 10886.00 |
| Basic Rate Rs.= | 84.00 | | | | | | | |
| Add 8% A.W Rs. = | 6.72 | | | | | | | |
| **Total Rate Rs. =** | **90.72** | | | | | | | |
| | | | | | | | Total cost of Construction of Drain | **2512443.00** |
| **MEDIANS AND ROAD FURNITURES** | | | | | | | | |
| i) Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC 35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 (P.No.194, I.No.24.15 of S.R 2012-13) | | | | | | | | |
| a) Lane | Sqm | 2 | 300.00 | 0.10 | -- | 60.00 | | |
| | | | | | | 60.00 | 429.84 | 25790.00 |
| Basic Rate Rs.= | 398.00 | | | | | | | |
| Add 8% A.W Rs. = | 31.84 | | | | | | | |
| **Total Rate Rs. =** | **429.84** | | | | | | | |



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| | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| | Providing and fixing Pre cast solid concrete kerb stones made out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete.of size 450x200x400mm [ P.No.28 I. 5.29.1 of KPWD SR 12-13) | | | | | | | | |
| | For drains | nos | 2500 | | | | 2500.00 | 284.08 | 710200.00 |
| | Basic Rate Rs.= | 268.00 | | | | | | | |
| | Add 6% A.W Rs. = | 16.08 | | | | | | | |
| | Total Rate Rs. = | 284.08 | | | | | | | |
| 3 | Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specificatins. Specification No.KRBS 800.3 MORT & H Specification No.800. [ P.No.192 I.NO 24.1 of KPWD SR 12-113) | | | | | | | | |
| | For Kerb Painting | Sqm | 2 | 300.00 | 0.45 | | 270.00 | 45.90 | 12392.00 |
| | Basic Rate Rs.= | 43.30 | | | | | | | |
| | Add 6% A.W Rs. = | 2.60 | | | | | | | |
| | Total Rate Rs. = | 45.90 | | | | | | | |
| | | | | | | | | Total cost of Road Furnitures | 748382.00 |
| 1 | Provision for Shifting of Electrical lines and etc complete. | | | | | | LS | | 1200000.00 |
| 2 | Provision for construction of compound wall near Raithra santhe building and Sunken | | | | | | LS | | 1000000.00 |
| 3 | Provision for Creation of work front for execution of work for dismanating | | | | | | LS | | 400000.00 |
| | | | | | | | | Sub total | 9915563.20 |
| 4 | Miscellaneous & Rounding off | | | | | | | | 84436.8 |
| | | | | | | | | Project Cost Total Rs. | 10000000.00 |

**Certificate**

1. The above location comes under jurisdiction of BBMP limit.
2. Certified that I have personally inspected the area and prepared the estimate.
3. Certified that the work proposed in this estimate is not included in any other scheme
4. Certified that the estimate is prepared as per 2012-13 SR of PWD

Assistant Engineer | Assistant Executive Engineer, Project sub division-Ynk | Executive Engineer, Project Division-Ynk

ADMINISTRATIVELY SANCTIONED FOR Rs.....

Rupees One Crore only

Under P.2786, Additional works

Registered as EE ( ) No. 846/13-14

Subject to conditions contained in enclosed memo EE ( ) No. 846/13-14

Dt. 23.1.2013 Estimate A/Sanctioned P2786. No. 846

dated 23.1.2013 Rs. 1,00,000/-

Joint Commissioner (Yelahanka Zone) BBMP. Bengaluru-92.

Technical Sanction for Rs. 100.00 lakh

One hundred lakhs only

is accorded under head P.2786 Additional works Gral

registered as CE No. CE/YNK/78/82/12-13 Subject to Conditions contained in enclosed memo No. ...../..... Dt. 24/1/13

AE/JE TA SE (BTP) CE (BTP)



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